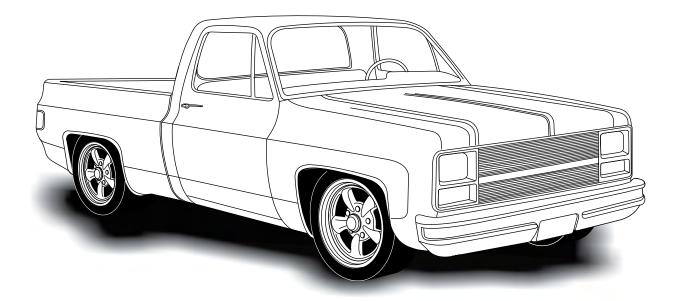


an ISO 9001:2015 Registered Company

# 1981-87 CHEVROLET PICKUP

WITHOUT FACTORY AIR 751181



18865 Goll St. San Antonio, TX 78266

Phone: 800-862-6658
Sales: sales@vintageair.com

Tech Support: tech@vintageair.com

www.vintageair.com



# **Table of Contents**

# **PAGES**

- 1. COVER
- 2. TABLE OF CONTENTS
- 3. PACKING LIST / PARTS DISCLAIMER
- 4. INFORMATION PAGE
- 5. WIRING NOTICE
- 6. ENGINE COMPARTMENT, CONDENSER ASSEMBLY, COMPRESSOR & BRACKET, PULLEYS
- 7. PASSENGER COMPARTMENT
- 8. DEFROST DUCT INSTALLATION & FRESH AIR CAP INSTALLATION AND FIREWALL MODIFICATION
- 9. FIREWALL MODIFICATION CONT. & FIREWALL COVER INSTALLATION
- 10. BRACKET & EVAPORATOR HARDLINE INSTALLATION
- 11. BRACKET & EVAPORATOR HARDLINE INSTALLATION CONT.
- 12. EVAPORATOR INSTALLATION
- DRAIN HOSE INSTALLATION, LUBRICATING O-RINGS, A/C HOSE INSTALLATION, & MODIFIED A/C HOSE KIT
- 14. HEATER HOSE & HEATER CONTROL VALVE INSTALLATION
- 15. A/C & HEATER HOSE ROUTING
- 16. PASSENGER SIDE LOUVER DASH PANEL MODIFICATION & INSTALLATION
- 17. DRIVER SIDE/CENTER LOUVER DASH PANEL MODIFICATION & INSTALLATION
- 18. DRIVER SIDE/CENTER LOUVER DASH PANEL MODIFICATION & INSTALLATION (CONT.)
- 19. FINAL STEPS
- 20. GLOVE BOX MODIFICATION
- 21. CONTROL PANEL & DUCT HOSE ROUTING
- 22. WIRING DIAGRAM
- 23. GEN IV WIRING CONNECTION INSTRUCTIONS
- 24. OPERATION OF CONTROLS
- 25. TROUBLESHOOTING INFORMATION
- 26. TROUBLESHOOTING INFORMATION CONT.
- 27. DRIVER SIDE LOUVER TEMPLATE
- 28. GLOVE BOX MODIFICATION TEMPLATE
- 29. EVAPORATOR KIT PACKING LIST



A detailed tech video outlining the passenger and driver side louver dash installation process is available on Vintage Air's YouTube channel at http://bit.ly/3xKRlqv.

Viewing the tech video along with the written instructions will provide the installer the most detailed installation procedure.



# **EVAPORATOR KIT PACKING LIST**

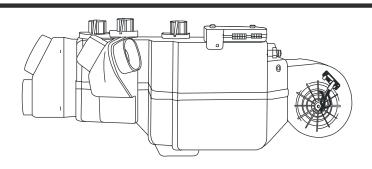
EVAPORATOR KIT 751181

NO.	QTY.	PART NO.	DESCRIPTION
1.	1	744004-VUE	GEN IV 4 VENT EVAP. SUB CASE w/ 204 ECU
2.	1	791181	ACCESSORY KIT 81-87 CHEV P-UP wo AC

\*\* BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.

(1)

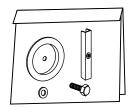
GEN IV 4 VENT EVAP SUB CASE w/204 ECU 744004-VUE

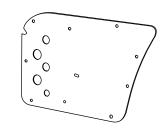


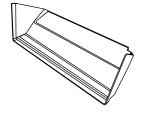
(2)





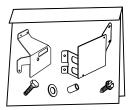


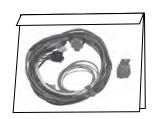


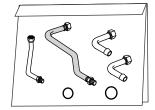


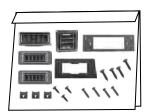












ACCESSORY KIT 791181 NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES.
REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES.



# Important Notice—Please Read

For Maximum System Performance, Vintage Air Recommends the Following:

NOTE: Vintage Air systems are designed to operate with R134a refrigerant only. Use of any other refrigerant could damage your A/C system and/or vehicle, and possibly cause a fire, in addition to potentially voiding the warranties of the A/C system and its components.

# **Refrigerant Capacities:**

Vintage Air System: 1.8 lbs. (28.8 oz.) or 816 grams of R134a, charged by weight with a quality charging station or scale. NOTE: Use of the proper type and amount of refrigerant is critical to system operation and performance.

Other Systems: Consult manufacturer's guidelines.

# **Lubricant Capacities:**

**New Vintage Air-Supplied Sanden Compressor:** No additional oil needed (Compressor is shipped with proper oil charge).

**All Other Compressors:** Consult manufacturer (Some compressors are shipped dry and will need oil added).

# **Safety Switches**

Your Vintage Air system is equipped with a binary pressure safety switch. A binary switch disengages the compressor clutch in cases of extreme low pressure conditions (refrigerant loss) or excessively high head pressure (406 PSI) to prevent compressor damage or hose rupture. A trinary switch combines Hi/Lo pressure protection with an electric fan operation signal at 254 PSI, and should be substituted for use with electric fans. Compressor safety switches are extremely important since an A/C system relies on refrigerant to circulate lubricant.

# **Service Info:**

**Protect Your Investment:** Prior to assembly, it is critical that the compressor, evaporator, A/C hoses and fittings, hardlines, condenser and receiver/drier remain capped. Removing caps prior to assembly will allow moisture, insects and debris into the components, possibly leading to reduced performance and/or premature failure of your A/C system. This is especially important with the receiver/drier.

Additionally, when caps are removed for assembly, **BE CAREFUL!** Some components are shipped under pressure with dry nitrogen.

**Evacuate the System for 35-45 Minutes:** Ensure that system components (Drier, compressor, evaporator and condenser) are at a temperature of at least 85°F. On a cool day, the components can be heated with a heat gun *or* by running the engine with the heater on before evacuating. Leak check and charge to specifications.

# **Bolts Passing Through Cowl and/or Firewall:**

To ensure a watertight seal between the passenger compartment and the vehicle exterior, for all bolts passing through the cowl and/or firewall, Vintage Air recommends coating the threads with silicone prior to installation.

# Heater Hose (not included with this kit):

Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.



# Important Wiring Notice—Please Read

Some vehicles may have had some or all of their radio interference capacitors removed. There should be a capacitor found at each of the following locations:

- 1. On the positive terminal of the ignition coil.
- 2. If there is a generator, on the armature terminal of the generator.
- 3. If there is a generator, on the battery terminal of the voltage regulator.

Most alternators have a capacitor installed internally to eliminate what is called "whining" as the engine is revved. If whining is heard in the radio, or just to be extra cautious, a radio interference capacitor can be added to the battery terminal of the alternator.

It is also important that the battery lead is in good shape and that the ground leads are not compromised. There should be a heavy ground from the battery to the engine block, and additional grounds to the body and chassis.

If these precautions are not observed, it is possible for voltage spikes to be present on the battery leads. These spikes come from ignition systems and charging systems, and from switching some of the vehicle's other systems on and off. Modern computer-operated equipment can be sensitive to voltage spikes on the power leads, which can cause unexpected resets, strange behavior and/or permanent damage.

Vintage Air strives to harden our products against these types of electrical noise, but there is a point where a vehicle's electrical system can be degraded so much that nothing can help.

Radio interference capacitors should be available at most auto and truck parts suppliers. They typically are cylindrical in shape, a little over an inch long and a little over a half-inch in diameter, and they have a single lead coming from one end of the cylinder with a terminal on the end of the wire, as well as a mounting clip which is screwed into a good ground on the vehicle. The specific value of the capacitance is not too significant in comparison to ignition capacitors that are matched with the coil to reduce pitting of the points.

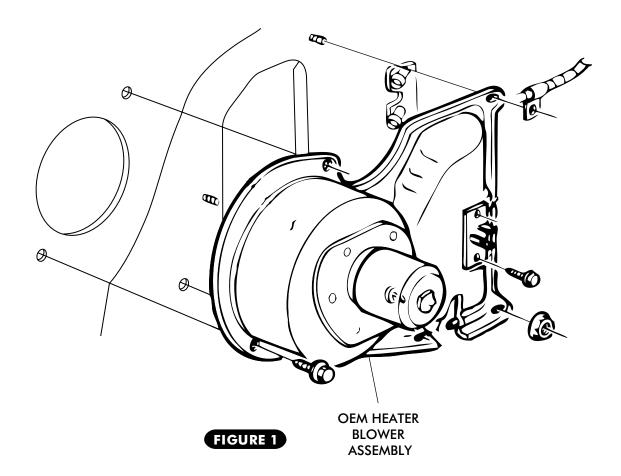
- Care must be taken, when installing the compressor lead, not to short it to ground.
  The compressor lead must not be connected to a condenser fan or to any other
  auxiliary device. Shorting to ground or connecting to a condenser fan or any other
  auxiliary device may damage wiring or the compressor relay, and/or cause a
  malfunction.
- When installing ground leads on Gen IV systems, the blower control ground and ECU ground must be connected directly to the negative battery post.
- For proper system operation, the heater control valve must be connected to the FCII

BEFORE STARTING THE INSTALLATION, CHECK THE FUNCTION OF THE VEHICLE (HORN, LIGHTS, ETC.) FOR PROPER OPERATIONS. STUDY THE INSTRUCTIONS, ILLUSTRATIONS, & DIAGRAMS.

# ENGINE COMPARTMENT

# **REMOVE THE FOLLOWING**

- ☐ DISCONNECT BATTERY.
- ☐ DRAIN RADIATOR, REMOVE RADIATOR (RETAIN).
- ☐ HEATER BLOWER ASSEMBLY AND OEM HEATER HOSES (DISCARD).
- □ NOTE: TO REMOVE THE OEM HEATER BLOWER ASSEMBLY (UNDER HOOD) AND THE AIR DISTRIBUTION SYSTEM (UNDER DASH), THE FACTORY MANUAL RECOMMENDS THAT YOU REMOVE RIGHT INNER FENDER FOR ACCESSIBILITY.



# **CONDENSER ASSEMBLY & INSTALLATION -**

REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE CONDENSER KIT TO INSTALL THE CONDENSER.

☐ BINARY SWITCH INSTALLATION (REFER TO CONDENSER INSTRUCTIONS).

# **COMPRESSOR & BRACKETS-**

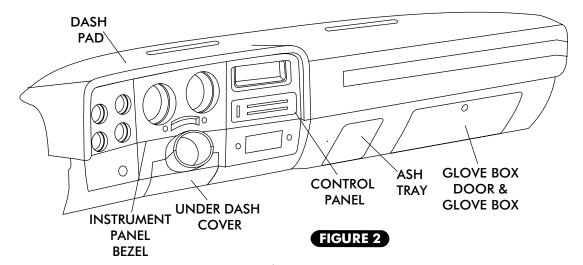
☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR AND BRACKET.

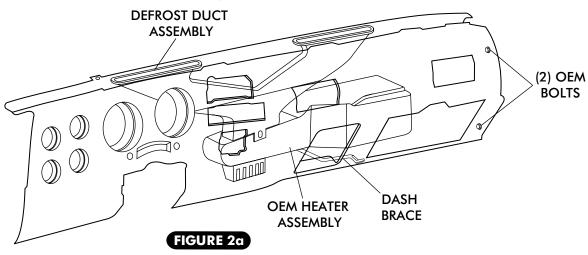


# PASSENGER COMPARTMENT-

# **REMOVE THE FOLLOWING:**

- ☐ GLOVE BOX DOOR AND GLOVE BOX ASSEMBLY (RETAIN) (SEE FIGURE 2, BELOW).
- ☐ UNDER DASH STEERING COLUMN COVER (RETAIN) (SEE FIGURE 2).
- ☐ INSTRUMENT PANEL BEZEL (RETAIN).
- ☐ DASH PAD (RETAIN) (SEE FIGURE 2).
- ☐ DISCONNECT ALL WIRES AND CABLES FROM CONTROL PANEL.
- REMOVE CONTROL PANEL (DISCARD). REFER TO CONTROL PANEL CONVERSION KIT INSTRUCTIONS.
- ☐ ASH TRAY (RETAIN).
- ☐ OEM HEATER ASSEMBLY (DISCARD) (SEE FIGURE 2a).
- ☐ DEFROST DUCT ASSEMBLY (DISCARD) (SEE FIGURE 2a).
- □ NOTE: FOR EASE OF INSTALLING EVAPORATOR UNDER DASH, IT MAYBE HELPFUL TO REMOVE THE
   (2) OEM BOLTS UNDER THE DASH ON THE PASSENGER SIDE DOOR PILLAR, AND PULL BACK DASH.

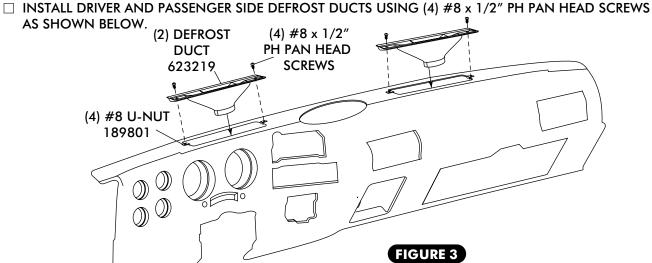






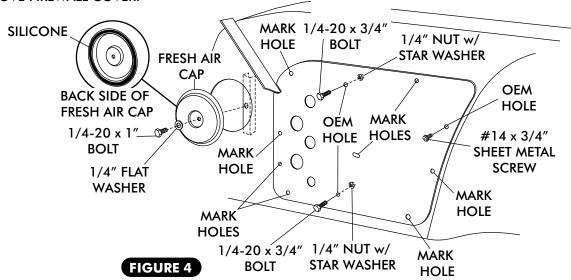
# **DEFROST DUCT INSTALLATION**

 $\ \square$  INSTALL (4) #8 U-NUTS IN OEM DEFROST DUCT OPENINGS AS SHOWN BELOW IN FIGURE 3.



# FRESH AIR CAP AND FIREWALL MODIFICATION

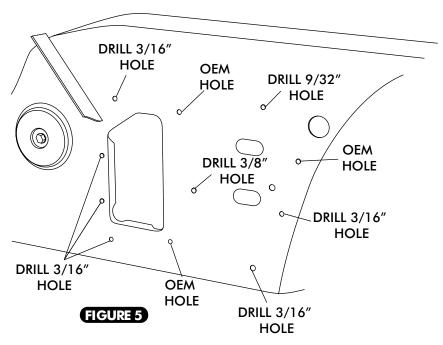
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN IN FIGURE 4, BELOW.
- ☐ ATTACH FRESH AIR CAP TO FIREWALL USING A 1/4-20 x 1" BOLT AND WASHER. SEE FIGURE 4, BELOW.
- □ PLACE FIREWALL COVER ON FIREWALL AND SECURE USING #14 x 3/4" SHEET METAL SCREW AND (2) 1/4-20 x 3/4" HEX BOLTS w/ 1/4" NUTS w/ STAR WASHER AS SHOWN BELOW.
- USING FIREWALL COVER AS TEMPLATE, MARK THE HOLES ON FIREWALL AS SHOWN BELOW.
- ☐ REMOVE FIREWALL COVER.





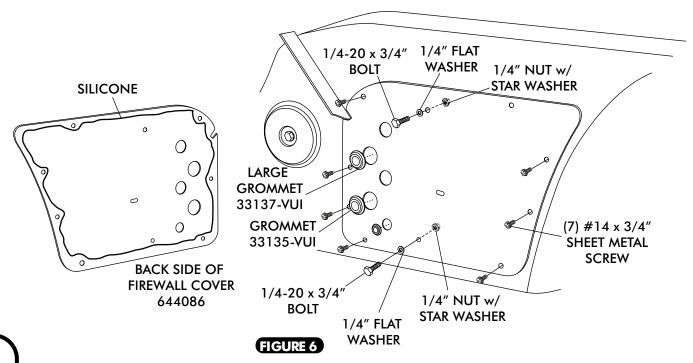
# FIREWALL MODIFICATION CONT. -

☐ DRILL HOLES AS SHOWN BELOW IN FIGURE 5.



# FIREWALL COVER INSTALLATION -

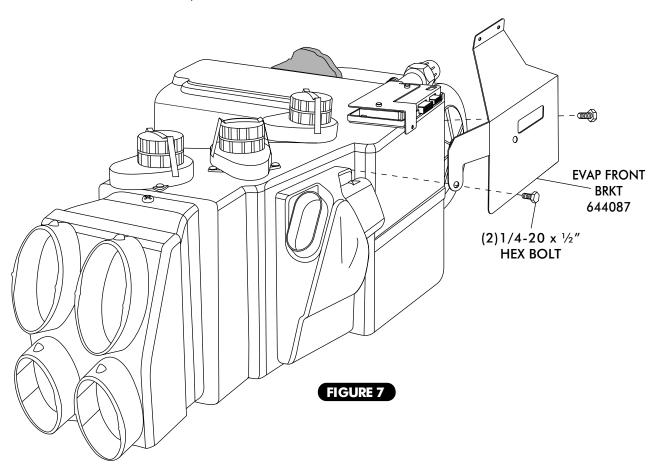
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER AS SHOWN BELOW.
- □ INSTALL FIREWALL COVER TO FIREWALL USING  $1/4-20 \times 3/4$ " HEX BOLT, 1/4" FLAT WASHER, 1/4" NUT w/ STAR WASHER AND (7) #14 x 3/4" SHEET METAL SCREWS AS SHOWN BELOW.
- ☐ INSTALL GROMMETS AS SHOWN BELOW.





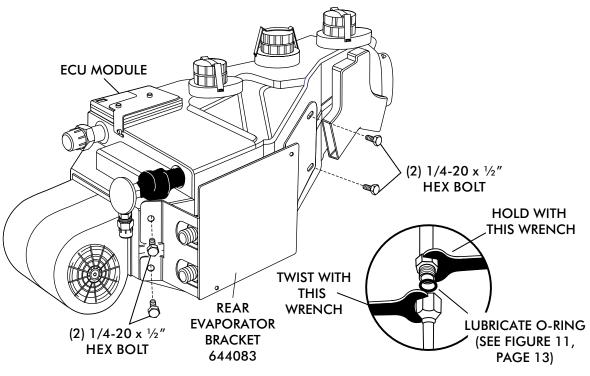
# **BRACKET & EVAPORATOR HARDLINE INSTALLATION —**

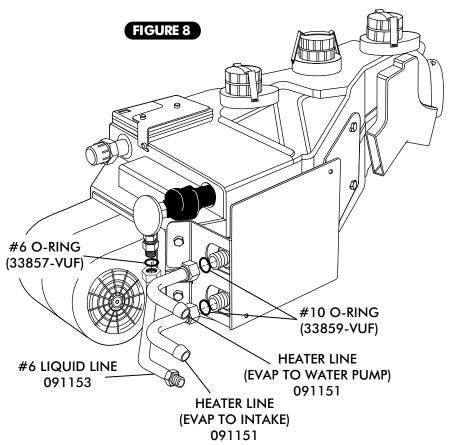
- $\Box$  ON A WORKBENCH, INSTALL EVAPORATOR REAR BRACKET USING (4) 1/4-20 x 1/2" HEX BOLTS (SEE FIGURE 8, PAGE 11).
- ☐ INSTALL #6 EVAP HARDLINE AND (2) HEATER HARDLINES WITH PROPERLY LUBRICATED O-RINGS (SEE FIGURE 8, PAGE 11, AND FIGURE 11, PAGE 13).
- $\square$  INSTALL EVAPORATOR FRONT BRACKET ON EVAPORATOR USING (2) 1/4-20 x 1/2" HEX BOLTS AND TIGHTEN AS SHOWN IN FIGURE 7, BELOW.





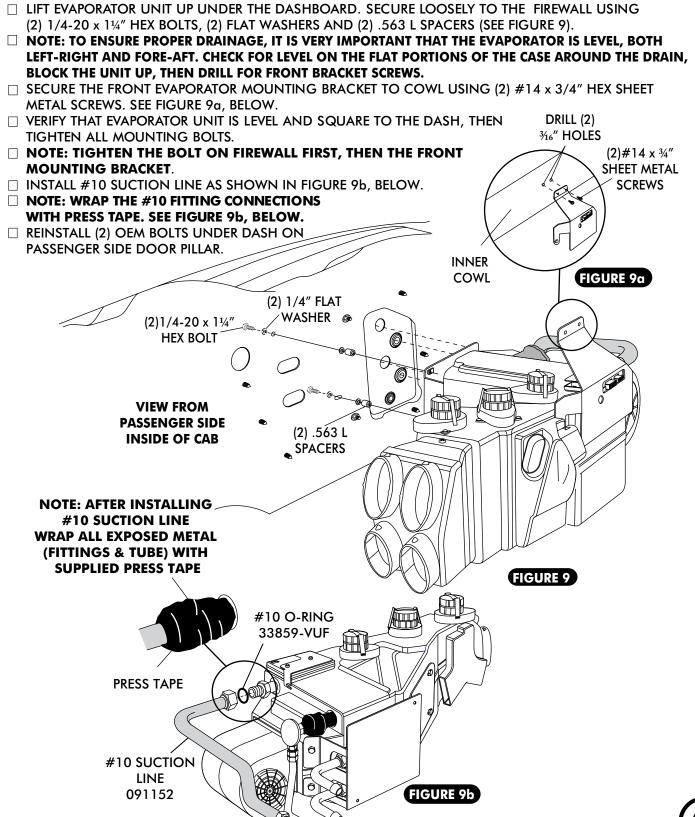
# **BRACKET & EVAPORATOR HARDLINE INSTALLATION CONT. -**







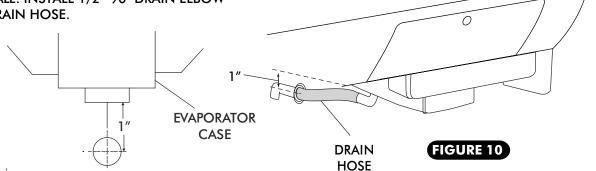
# **EVAPORATOR INSTALLATION**



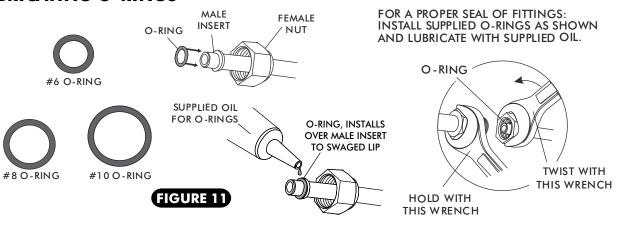


# DRAIN HOSE INSTALLATION

- ☐ LOCATE EVAPORATOR DRAIN ON BOTTOM OF EVAPORATOR CASE.
- □ IN LINE WITH DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL, MEASURE 1" DOWN AND DRILL A 5/8" HOLE THROUGH THE FIREWALL.
- □ INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE THROUGH FIREWALL. INSTALL 1/2" 90° DRAIN ELBOW ON DRAIN HOSE.



# **LUBRICATING O-RINGS**



# A/C HOSE INSTALLATION STANDARD HOSE KIT

- UCCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 11, ABOVE) AND CONNECT THE 90° FEMALE FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR. ROUTE THE STRAIGHT FEMALE FITTING w/ 134α SERVICE PORT TO THE #8 CONDENSER HARDLINE COMING THROUGH CORE SUPPORT. SEE FIGURE 13, PAGE 15. TIGHTEN EACH FITTING CONNECTION AS SHOWN.
- □ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS (SEE FIGURE 11, ABOVE) AND CONNECT THE #10 135° FEMALE FITTING w/134α SERVICE PORT TO THE #10 SUCTION PORT ON THE COMPRESSOR. ROUTE THE STRAIGHT FEMALE FITTING TO THE #10 EVAPORATOR. SEE FIGURE 12, PAGE 14 AND FIGURE 13, PAGE 15. TIGHTEN EACH FITTING CONNECTION AS SHOWN.
- ☐ INSTALL #6 A/C LIQUID LINE AS SHOWN IN FIGURE 13, PAGE 15.

# MODIFIED A/C HOSE KIT —

REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH MODIFIED HOSE KIT.



# **HEATER HOSE & HEATER CONTROL VALVE INSTALLATION -**

- ☐ ROUTE HEATER HOSE FROM WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 12, BELOW. SECURE USING HOSE CLAMPS. **NOTE: A SMALL AMOUNT OF SILICONE SPRAY WILL EASE HEATER HOSE INSTALLATION.**
- ☐ ROUTE HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN BELOW. **NOTE: INSTALL HEATER CONTROL VALVE IN LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE. SECURE USING HOSE CLAMPS AS SHOWN. NOTE PROPER FLOW DIRECTION.**
- ☐ HOSE SHOULD PROTRUDE THROUGH THE FIREWALL COVER SLIGHTLY TO CLOSE THE GAP BETWEEN THE ALUMINUM LINE AND THE FIREWALL COVER. SEAL ANY REMAINING GAP WITH RTV SILICONE.

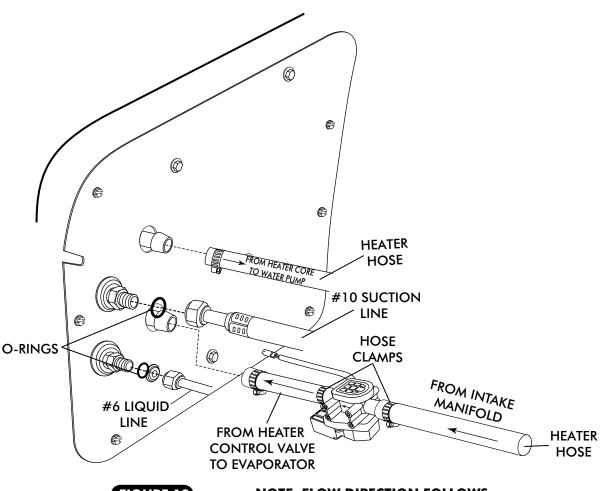
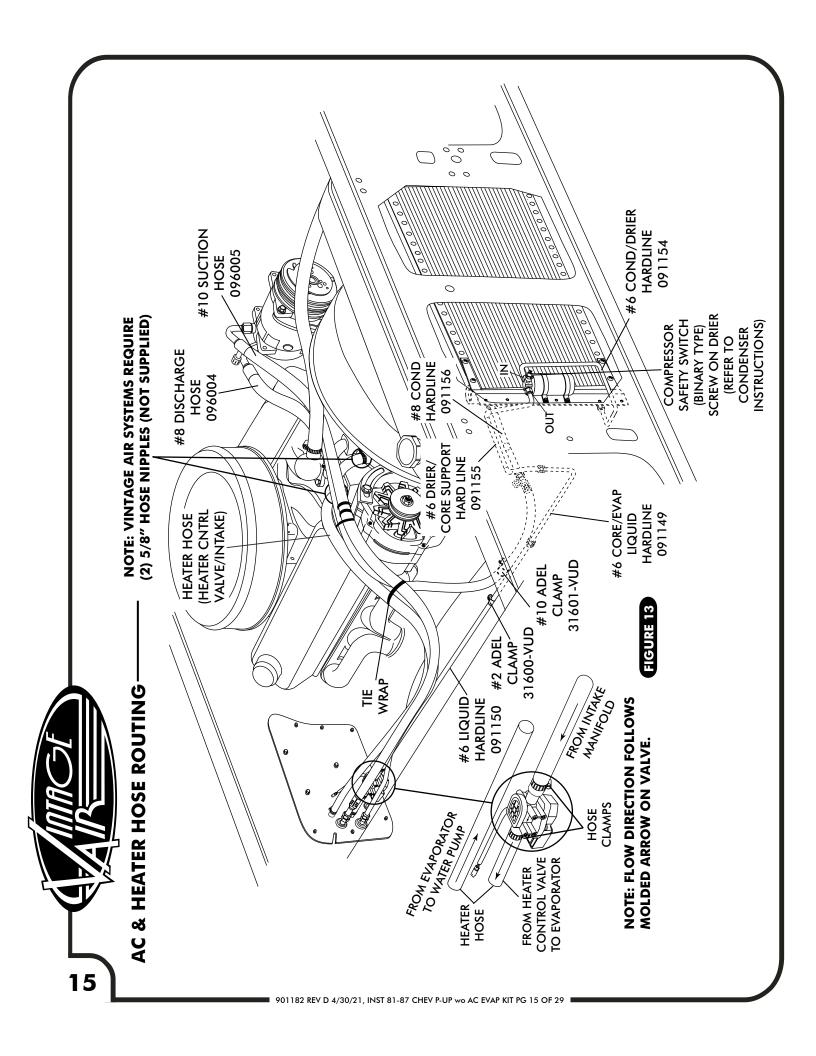


FIGURE 12

NOTE: FLOW DIRECTION FOLLOWS MOLDED ARROW ON VALVE.

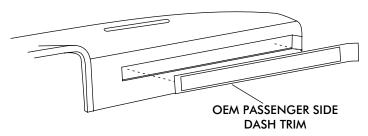


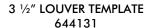


# **PASSENGER SIDE**

# LOUVER DASH PANEL MODIFICATION & INSTALLATION-

- ☐ REMOVE THE PASSENGER SIDE DASH TRIM FROM THE DASH PAD (SEE FIGURE 14, BELOW).
- □ PLACE THE SUPPLIED TEMPLATE (ARROWS POINTING UP) ONTO THE BACK SIDE OF THE DASH PANEL TRIM AS SHOWN IN PHOTO 1, BELOW. MARK AND DRILL THE (2) MOUNTING HOLES USING A 5/32" DRILLBIT (SEE PHOTO 1, BELOW), THEN REMOVE THE TEMPLATE.
- ☐ FLIP THE DASH PANEL TRIM OVER, AND PLACE THE TEMPLATE ONTO THE FRONT OF THE TRIM USING THE (2) SUPPLIED #8 x 1" OVAL HEAD SCREWS TO SECURE. TRIM THE AREA INSIDE THE TEMPLATE TO FIT THE NEW LOUVER (SEE PHOTO 2, BELOW).
- $\ \square$  REMOVE THE SCREWS AND TEMPLATE FROM THE DASH PANEL TRIM.
- ☐ REPEAT STEPS 2 AND 3 FOR THE OTHER LOUVER ON THE DASH PANEL TRIM.
- ☐ INSTALL THE NEW LOUVERS INTO THE MODIFIED DASH PANEL TRIM USING (2) #8 x 1" OVAL HEAD SCREWS (SEE PHOTOS 3 AND 4, BELOW).





ARROWS POINTING UP

FIGURE 14



MARK AND DRILL (2) MOUNTING HOLES USING 5/32" DRILLBIT

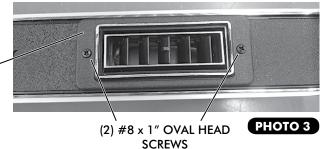




TRIM AREA INSIDE
TEMPLATE TO FIT NEW LOUVER



RECTANGLE CHROME LOUVER WITH 2 1/2" HOSE ADAPTER
AND BEZEL
490549





**FINAL INSTALLATION** 

PHOTO 4



# **DRIVER SIDE/CENTER LOUVER** DASH PANEL MODIFICATION & INSTALLATION

- ☐ USING THE DRIVER SIDE LOUVER TEMPLATE PROVIDED ON PAGE 27, MARK AND CUT THE INSTRUMENT PANEL BEZEL AS SHOWN IN FIGURE 15, BELOW.
- ☐ MEASURE, MARK, CUT AND REMOVE THE BACK OF THE PACKAGE TRAY (SEE PHOTO 1 AND FIGURE 15A, BELOW). NOTE: BE SURE TO CUT USING THE DIMENSION PROVIDED TO PROPERLY INSTALL THE NEW LOUVER BEZEL.
- ☐ PLACE THE DRIVER SIDE LOUVER INTO THE SQUARE OPENING AND DRILL THE (4) MOUNTING HOLES USING A 3/32" DRILL BIT, THEN SECURE THE LOUVER USING (4) #4 x 1/2" SCREWS (SEE PHOTOS 2 AND 3, BELOW).

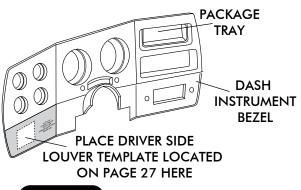


FIGURE 15



TOP VIEW PHOTO 1

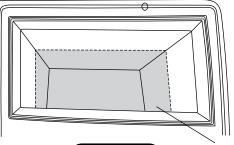


FIGURE 15a

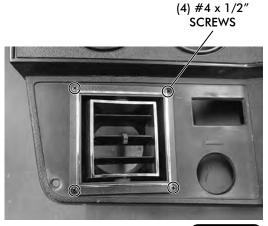
**CUT PACKAGE TRAY** 

DRILL (4) MOUNTING **HOLES USING** 3/32" DRILLBIT

**SQUARE ASSEMBLY LOUVER WITH** 2 1/2" HOSE ADAPTER 49178-VCL



PHOTO 2



РНОТО 3



# DRIVER SIDE/CENTER LOUVER DASH PANEL MODIFICATION & INSTALLATION (CONT.) -

- □ PLACE THE LOUVER BEZEL INTO THE PACKAGE TRAY OPENING. **NOTE: BE SURE THE BEZEL IS SITTING ON THE TRAY LIP.** USING THE LOUVER BEZEL AS A TEMPLATE, DRILL (3) 5/32" MOUNTING HOLES INTO THE TOP AND BOTTOM WALLS OF THE TRAY (SEE PHOTOS 4, 5 AND 6, BELOW)
- ☐ REMOVE THE LOUVER BEZEL FROM THE TRAY AND INSTALL (3) #8 J-NUTS (SEE PHOTO 7, BELOW).
- ☐ REINSTALL THE LOUVER BRACKET INTO THE BEZEL AND SECURE THE BRACKET USING (3) #8 x 1/2" PAN HEAD SCREWS (SEE PHOTOS 8 AND 9, BELOW).
- ☐ INSTALL THE LOUVER INTO THE LOUVER BRACKET (SEE PHOTO 10, BELOW).

PLACE LOUVER BEZEL INTO PACKAGE TRAY OPENING



РНОТО 4

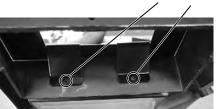
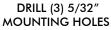


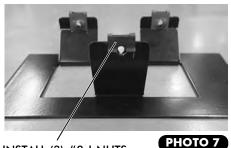
PHOTO 5



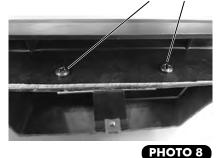


РНОТО 6

(3) #8 x 1/2" PAN HEAD SCREWS



INSTALL (3) #8 J-NUTS



0 /



РНОТО 9

INSTALL LOUVER INTO LOUVER BRACKET



**PHOTO 10** 

# RECTANGLE CHROME LOUVER WITH 2 ½" HOSE ADAPTER 490548



SEE OPERATION OF CONTROLS PROCEDURES PAGE 24.

# **FINAL STEPS**

INSTALL DUCT HOSES AS SHOWN IN FIGURE 18, PAGE 21.
ROUTE A/C WIRES THROUGH 3/8" GROMMET AS SHOWN IN FIGURE 16, BELOW.
(12 VOLT/GROUND/BINARY SWITCH/HEATER VALVE).
PLUG THE WIRING HARNESS IN THE ECU MODULE ON SUB CASE AS SHOWN IN FIGURE 18, PAGE 21
(WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 22 AND 23).
MODIFY GLOVE BOX AS SHOWN ON PAGE 20.
REINSTALL GLOVE BOX.
REINSTALL ALL PREVIOUSLY REMOVED ITEMS, INNER FENDER.
FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND DISTILLED WATER. IT IS THE
OWNER'S RESPONSIBILITY TO KEEP THE FREEZE PROTECTION AT THE PROPER LEVEL FOR THE CLIMATE IN
WHICH THE VEHICLE IS OPERATED. FAILURE TO FOLLOW ANTIFREEZE RECOMMENDATIONS WILL CAUSE
HEATER CORE TO CORRODE PREMATURELY AND POSSIBLY BURST IN A/C MODE AND/OR FREEZING WEATHER,
VOIDING YOUR WARRANTY.
DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
VINTAGE AIR RECOMMENDS THAT ALL A/C SYSTEMS BE SERVICED BY A CERTIFIED AUTOMOTIVE AIR
CONDITIONING TECHNICIAN.
EVACUATE THE SYSTEM FOR A MINIMUM OF 45 MINUTES PRIOR TO CHARGING AND LEAK CHECK PRIOR
TO SERVICING.
CHARGE THE SYSTEM TO THE CAPACITIES STATED ON THE INFORMATION PAGE (PAGE 4) OF THIS
INSTRUCTION MANUAL

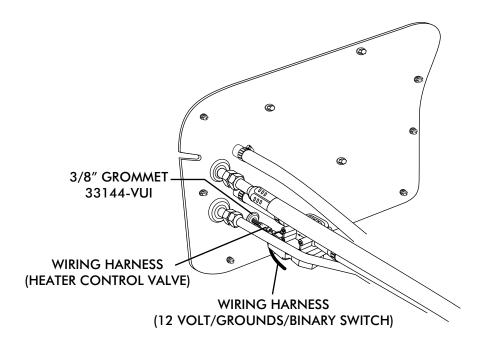
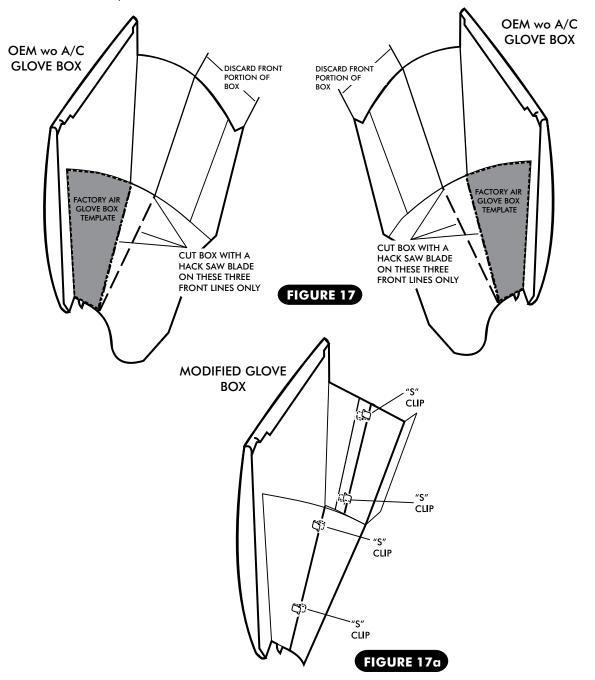


FIGURE 16



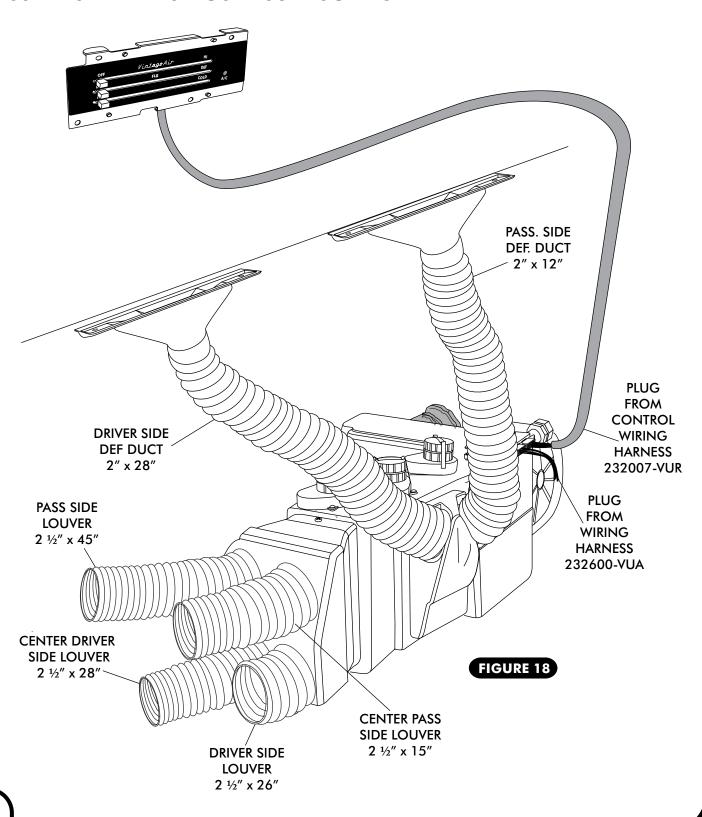
# **GLOVE BOX MODIFICATION -**

- ☐ USE GLOVE BOX MODIFICATION TEMPLATE PROVIDED ON PAGE 26.
- ☐ PLACE TEMPLATE ON THE OUTSIDE OF THE GLOVE BOX. MARK THE OUTSIDE OF THE GLOVE BOX ALONG THE FRONT OF THE TEMPLATE AS SHOWN IN FIGURE 17 BELOW.
- □ PLACE THE SAME TEMPLATE ON THE OUTSIDE OF THE GLOVE BOX ON THE OPPOSITE SIDE. MARK THE OUTSIDE OF THE GLOVE BOX ALONG THE FRONT OF THE TEMPLATE AS SHOWN BELOW.
- $\ \square$  MARK THE BOTTOM OF THE BOX CONNECTING EACH END OF TEMPLATE.
- CUT THE BOX ON THE LINES YOU HAVE MARKED. DISCARD THE FRONT PORTION OF THE BOX.
- □ INSTALL THE NEW SUPPLIED GLOVE BOX BY PRESSING THE S-CLIPS ONTO THE OEM PORTION OF THE BOX AS SHOWN IN FIGURE 17a, BELOW.



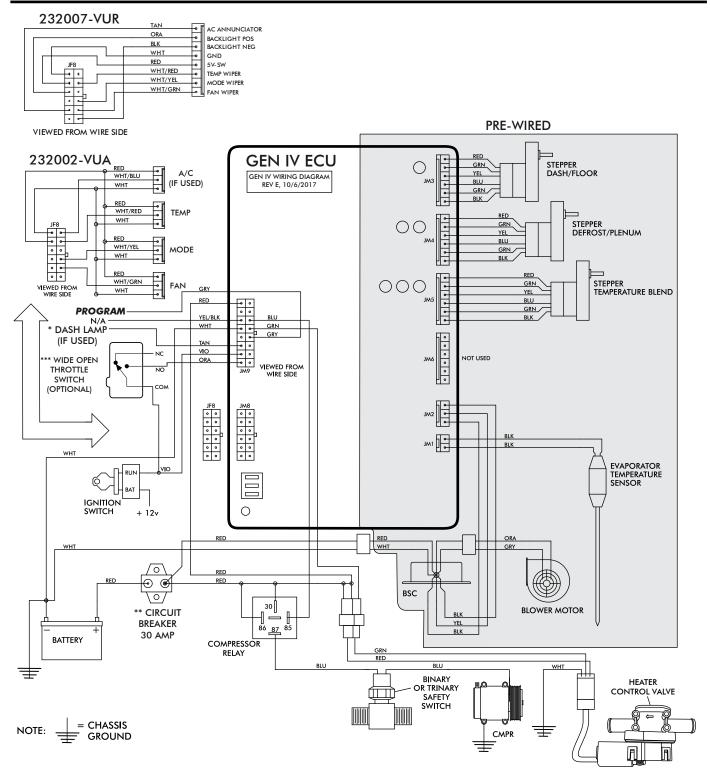


# **CONTROL PANEL & DUCT HOSE ROUTING-**





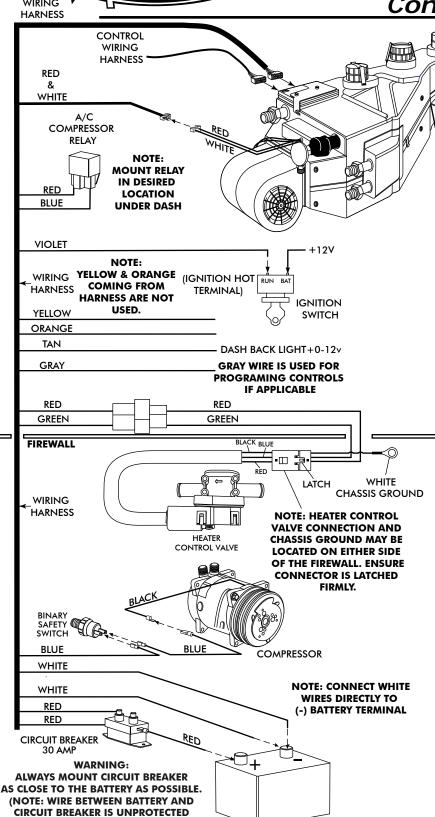
# Wiring Diagram



- \* Dash lamp is used only with type 232007-VUR harness.
- \*\* Warning: Always mount circuit breaker as close to the battery as possible. (NOTE: Wire between battery and circuit breaker is unprotected and should be carefully routed to avoid a short circuit).
- \*\*\* Wide open throttle switch contacts close only at full throttle, which disables A/C



# Gen IV Wiring Connection Instruction



# **Ignition Switch:**

Violet 12V ignition switch source (key on accessory) position must be switched.

# Dash Light:

When using a Vintage Air-supplied control panel, connect the tan wire from the Gen IV evaporator wiring harness to the factory dash lights to enable panel backlighting.

# **Heater Control Valve:**

Install with servo motor facing down, as shown. Note flow direction arrow molded into valve body and install accordingly.

# Binary/Trinary & Compressor:

Binary: Connect as shown (typical compressor wiring). Be sure compressor body is grounded.

Trinary Switch: Connect according to trinary switch wiring diagram.

# Circuit Breaker/Battery:

White **must** run to (-) battery. Red may run to (+) battery or starter. Mount circuit breaker as close to battery as possible.

AND SHOULD BE CAREFULLY ROUTED TO AVOID A SHORT CIRCUIT).

**BATTERY** 



# OPERATION OF CONTROLS

NOTE: WHEN BATTERY POWER IS FIRST CONNECTED TO THE ECU, THE MICRO PROCESSOR GOES THROUGH AN INITIALIZATION SEQUENCE.THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. DURING INITIALIZATION THE BLOWER WILL NOT OPERATE. BUT THE DOORS INSIDE THE UNIT WILL BE OPERATING. A LOW BATTERY OR DISCONNECTING THE BATTERY MAY ALSO TRIGGER A RE-INITIALIZATION. DURING START UP, A LOW BATTERY MAY DROP BELOW 7 VOLTS, TRIGGERING **RE-INITIALIZATION.** 

### **AC MODE**



# **BLOWER SPEED**

ADJUST TO DESIRED SPEED

# **MODE LEVER**

SLIDE THE LEVER TO THE LEFT POSITION

# **TEMPERATURE LEVER**

**TEMPERATURE** 

**LEVER** 

IN A/C MODE SLIDE THE TEMPERATURE LEVER ALL THE WAY TO THE RIGHT TO ENGAGE COMPRESSOR. (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

**TEMPERATURE LEVER** 

SLIDE THE TEMPERATURE

LEVER ALL THE WAY LEFT

# **HEAT MODE**



### **BLOWER SPEED**

ADJUST TO DESIRED SPEED

# **MODE LEVER**

TO THE HOT POSITION. SLIDE THE LEVER TO (SLIDE LEVER LEFT OR RIGHT THE CENTER POSITION TO DESIRED TEMPERATURE)

### **DEFROST/ DE-FOG MODE**



# **BLOWER SPEED**

ADJUST TO DESIRED **SPEED** 

### MODE LEVER

SLIDE THE LEVER TO THE RIGHT POSITION

# **TEMPERATURE LEVER**

ADJUST LEVER TO DESIRED TEMPERATURE. (COMPRESSOR IS **AUTOMATICALLY** ENGAGED)

Symptom Condition Checks  Symptom Condition Checks  1a.   No other functions work.   Check for damaged pins or lightlion is on.   No other functions work.   Check for damaged blower stays on high speed when lightlion is on.   Mail other functions work.   Check for damaged blower stays on high speed when lightlion is on.   Mail other functions work.   Check for damaged blower stays on high speed when lightly speed when lightly control head wire at various points.   Check for damaged blower stays on high speed when lightly speed lightly speed lightly speed when lightly speed lightly speed when lightly speed lightly speed when lightly						<u> </u>	<u> </u>
Symptom Condition  1a.  Symptom Condition  1a.  No other functions work.  All other functions or off.  System is not charged.  System is charged.	Troublesho	Actions	Verify that all pins are inserted into plug. Ensure that no pins are bent or damaged in ECU.  Verify continuity to chassis ground with white control head wire at various points.			Charge system or bypass pressure switch.	
Symptom  1a.  Blower stays on high speed when ignition is on.  Blower stays on high speed when ignition is on or off.  Compressor will not turn on (All other functions) work).		Checks	Check for damaged pins or wires in control head plug. Check for damaged ground harness. Check for damaged blower check for damaged blower switch or potentiometer and associated wiring.	wer yed.		System must be charged for compressor to engage.	
		Condition	No other functions work.  All other functions work.				
	25	Symptom	Ta. Blower stays on high speed when ignition is on.	I <del>-</del>	1-87 CHEV	101	

Loss of ground on this wire renders control head inoperable.

See blower switch check procedure.

**Troubleshooting Guide** 

Notes

No other part replacements should be necessary.

=\/				
O SUBSTRACE SU	System is not charged.	System must be charged for compressor to engage.	→ Charge system or bypass pressure switch.	Danger: Never bypass safety switch with engine running. Serious injury can result.
Compressor will not turn on (All other functions work).		Check for faulty A/C potentiometer or associated wiring (not applicable to 3-pot controls).	Check continuity to ground on white control head wire.	To check for proper pot function, check voltage at white/blue wire. Voltage should be be between 0V and the pot will your with pot
20	System is charged.	Check for disconnected or faulty thermistor.	→ Check 2-pin connector at ECU housing.	lever position.  ► Disconnected or faulty
				compressor to be disabled.
3. Compressor will not turn off		Check for faulty A/C  → potentiometer or associated wiring.	Repair or replace pot/control wiring.	Red wire at A/C pot should have approximately 5V with ignition on. White will have continuity to the species of
(All other functions work).		Check for faulty A/C relay.	→ Replace relay.	chassis ground. white/ Blue wire should vary between OV and 5V when lever is moved up or down.

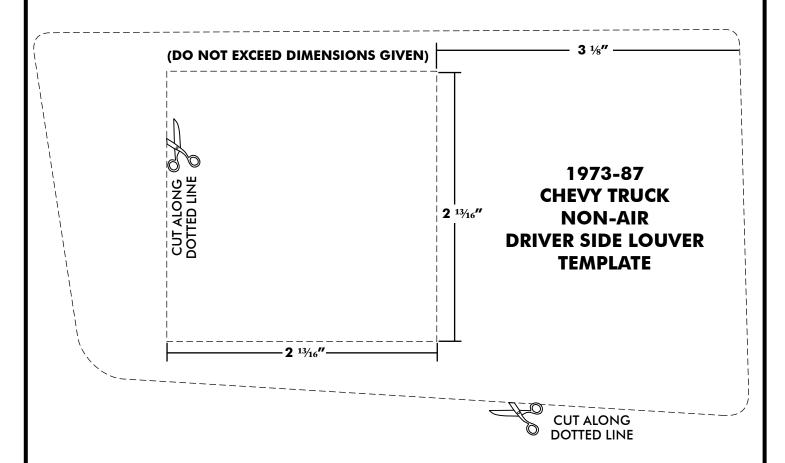


# Troubleshooting Guide (Cont.)

Symptom	Condition	Checks	Actions	Notes
4	Works when engine is not running; shuts off when engine is started (typically early Gen IV, but possible on all	Noise interference from either ignition or alternator.	Install capacitors on ignition coil and alternator. Ensure good ground at all points. Relocate coil and associated wiring away from ECU and ECU wiring. Check for burned or loose plug wires.	Ignition noise (radiated or conducted) will cause the system to shut down due to high voltage spikes. If this is suspected, check with a quality oscilloscope. Spikes
System will not turn on, or runs intermittently.	wersions).  Will not turn on under any conditions.	Verify connections on power lead, ignition lead, and both white ground wires.	Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.	greater than Toy will shut down the ECU. Install a radio capacitor at the positive post of the ignition coil (see radio capacitor installation bulletin). A
EV D 4/30/2		Verify battery voltage is greater than 10 volts and less than 16.	Verify proper meter function by checking the condition of a known good battery.	faulty alternator or worn out battery can also result in this condition.
15. 15. 16. Loss of mode door	No mode change at all.	Check for damaged mode  switch or potentiometer and associated wiring.		Typically caused by evaporator housing installed in a bind in the
CHEV P-UP wo	Partial function of mode doors.	Check for obstructed or binding mode doors.  Check for damaged stepper motor or wiring.		wehicle. Be sure all mounting locations line up and don't have to be forced into position.
Defending the second se	Battery voltage is at least 12V.  Battery voltage is less than 12V.	Check for at least 12V at circuit breaker.  Check for faulty battery or alternator.	Ensure all system grounds and power connections are clean and tight.	System shuts off blower at 10%. Poor connections or weak battery can cause shutdown at up to 11%.
Frratic functions of blower, mode, temp, etc.		Check for damaged switch or pot and associated wiring.	→ Repair or replace.	
When ignition is turned on, blower momentarily comes on, then shuts off. This occurs with the blower switch in the OFF position.		This is an indicator that the system has been reset. Be sure the red power wire is on the battery post, and not on a switched source. Also, if the system is pulled below 7V for even a split second, the system will reset.	→ Run red power wire directly to battery.	



# **DRIVER SIDE LOUVER TEMPLATE**



NOTE: Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.



# **GLOVE BOX MODIFICATION TEMPLATE —**

73-87 CHEV P-UP GLOVE BOX MODIFICATION TEMPLATE

NOTE: Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.

CUT ALONG DOTTED LINE



# **EVAPORATOR KIT PACKING LIST**

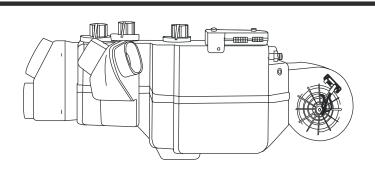
EVAPORATOR KIT 751181

NO.	QTY.	PART NO.	DESCRIPTION	
1.	1	744004-VUE	GEN IV 4 VENT EVAP. SUB CASE w/ 204 ECU	
2.	1	791181	ACCESSORY KIT 81-87 CHEV P-UP wo AC	

CHECK BY: \_\_\_\_\_\_
PACKED BY: \_\_\_\_\_
DATE: \_\_\_\_

1

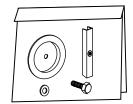
GEN IV 4 VENT EVAP SUB CASE w/204 ECU 744004-VUE

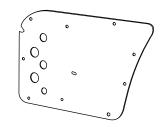


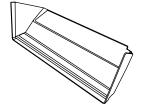






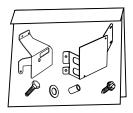


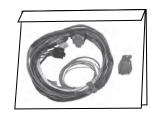


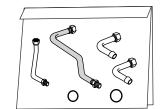


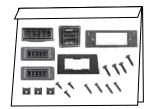












ACCESSORY KIT 791181 NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES. REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES.